

Greenville Nonattainment Area

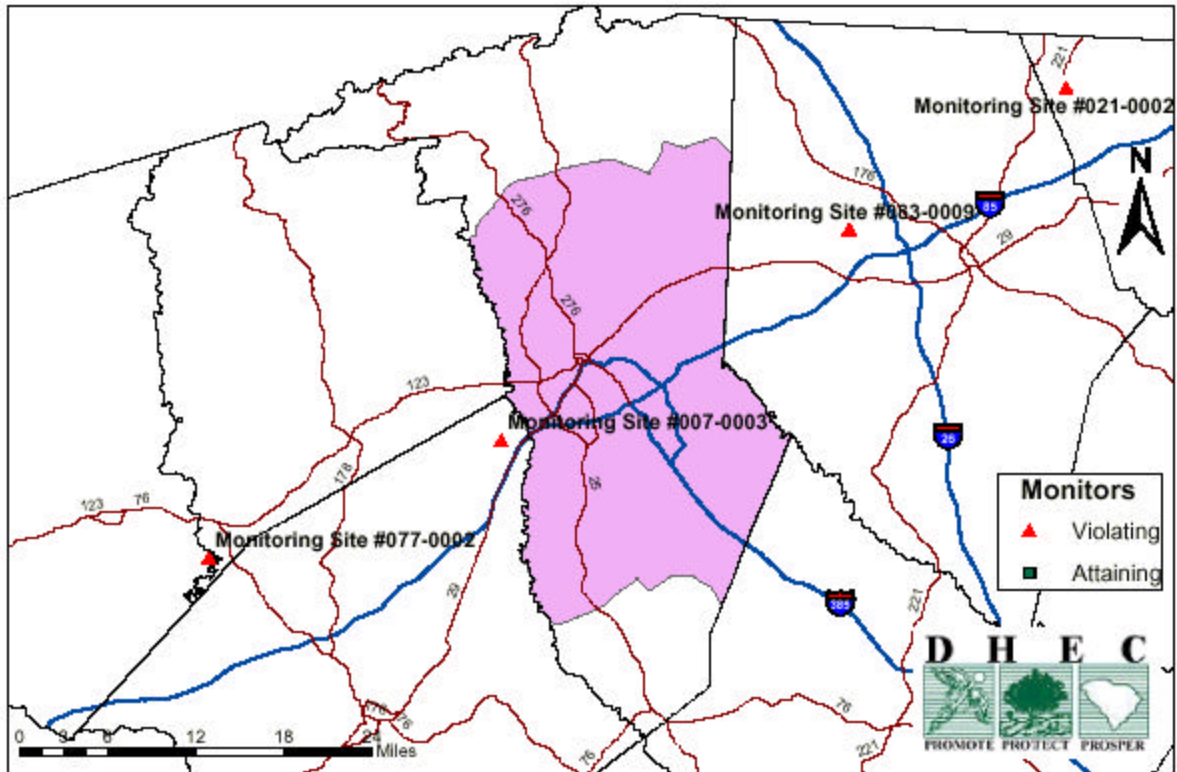


Figure 1: Greenville Nonattainment Area Map

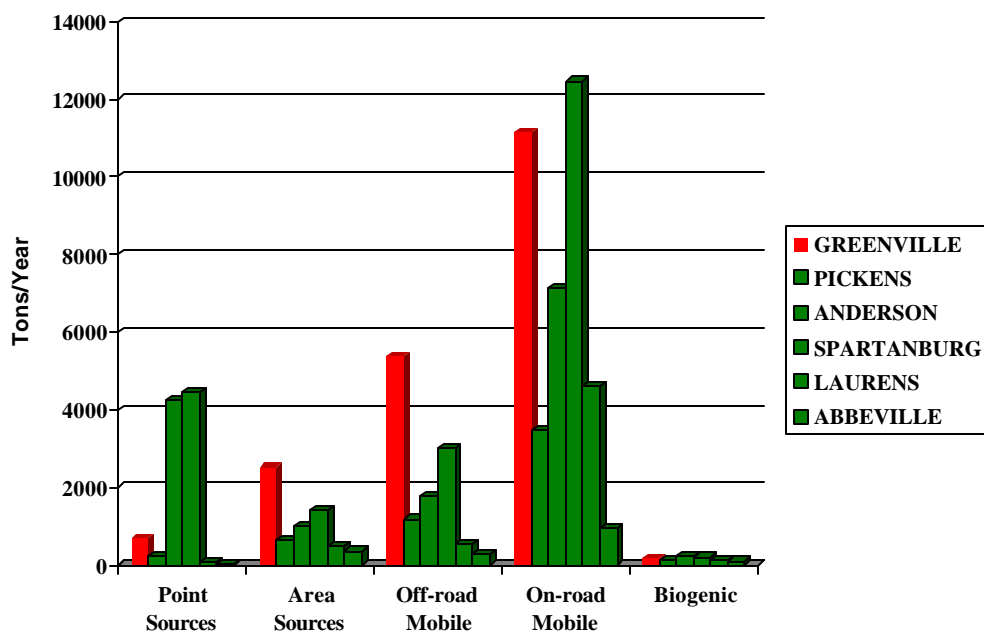
The South Carolina Department of Health and Environmental Control (Department) recommends that the area within Greenville County encompassed by the boundaries of the Greenville Metropolitan Planning Organization (MPO) be designated a nonattainment area for violating the 8-hour ozone National Ambient Air Quality Standard (air quality standard) based on 2000 through 2002 monitoring data. This recommended area will be referred to as the Greenville Nonattainment Area throughout the rest of this document.

The recommended boundary for the Greenville Nonattainment Area captures the most urbanized portion of the County, as 95% of the population resides within this boundary. The proposed boundary captures 89% of the NO_x point source emissions and 97% of the VOC point source emissions. This boundary also captures 95% of the daily vehicle miles traveled and it is estimated that the boundary will continue to capture this same percentage in 2025. While Greenville County does not have an ozone monitor, because of the location of the core of the population in the Greenville Nonattainment Area, the monitor at Powdersville in Anderson County best reflects the air quality in the area.

The Department is submitting this document to provide detailed information pertaining to the factors which EPA suggested be addressed in support of any nonattainment area designation recommendations.

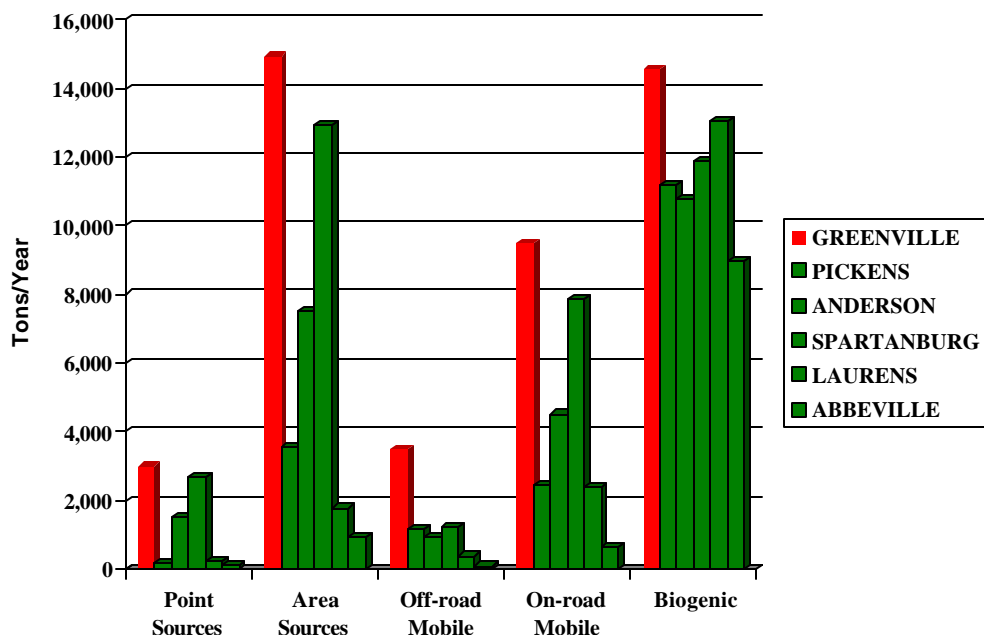
A. Emissions and Air Quality in Adjacent Areas (Including Adjacent MSAs)

Figure A-1: NO_x Sources for Greenville and Adjacent Counties*



* Order of bars corresponds with order of counties in legend.

Figure A-2: VOC Sources for Greenville and Adjacent Counties*



* Order of bars corresponds with order of counties in legend.

To evaluate the emissions in Greenville County and the adjacent areas, South Carolina utilized the estimated annual 1999 oxides of nitrogen (NO_x) and volatile organic compounds (VOC) emissions. The types of NO_x and VOC emission sources that were evaluated include point, area, biogenic, and on-road and off-road mobile sources. Figures A-1 and A-2 show the percentage of emissions from each source category for Greenville County and surrounding South Carolina Counties. Additional emissions inventory information is provided in Section D.

B. Population Density and Degree of Urbanization Including Commercial Development (Significant Difference from Surrounding Areas)

According to the US Census, urban is defined as all territory, population, and housing units in urbanized areas and urban clusters. An urbanized area is defined as a densely settled area that has a census population of at least 50,000, and an urban cluster is defined as a densely settled area that has a census population of 2,500 to 49,999. An urban area is a generic term that refers to both urbanized areas and urban clusters. Rural is defined as all territory, population, and housing units located outside of urbanized areas and urban clusters.

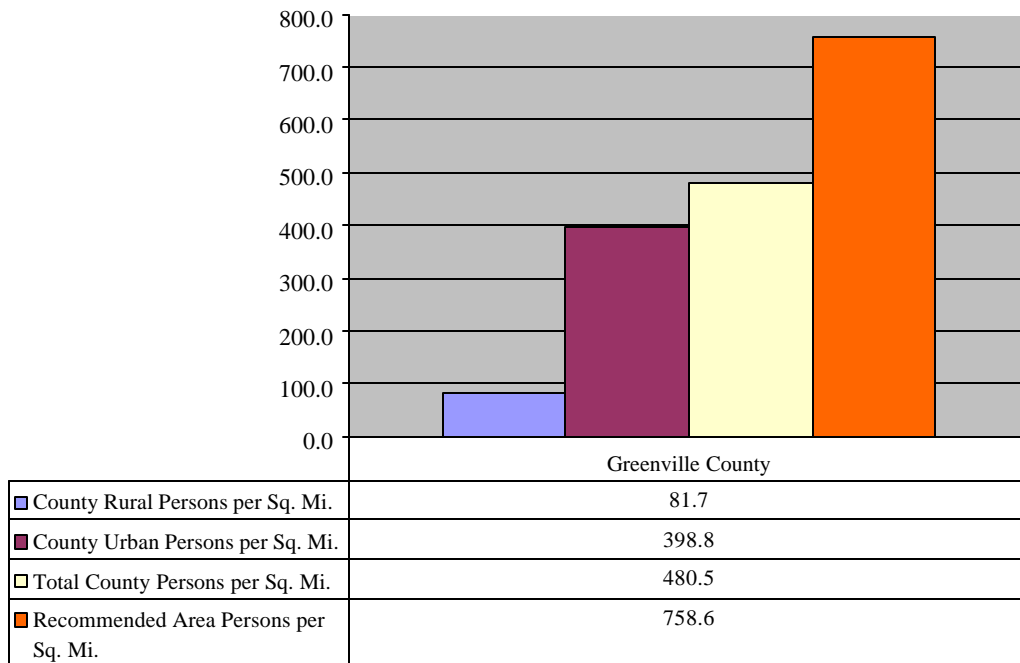
Greenville County is 790 square miles and had a population of 379,616 in 2000. The current population density is 480.5 persons per square mile. The majority of Greenville County's population is urban as 83%, or 315,095 persons, mostly reside in urbanized areas. The recommended area portion of Greenville County has a population of 359,875 and encompasses 474.4 square miles, or 60% of the county's land area. The population density in the Greenville portion of the boundary is 758.6 persons per square mile.

Table B-1: Total Population, Land Area, and Urban/Rural Population, 2000		
	Greenville County	Recommended Area
Population ¹	379,616	359,875
Land Area (Square Miles) ¹	790	474.4
Persons per Square Mile ¹	480.5	758.6
Urban Population ²	315,095	
% Urban Population ²	83.0%	
Rural Population ²	64,521	
% Rural Population ²	17.0%	

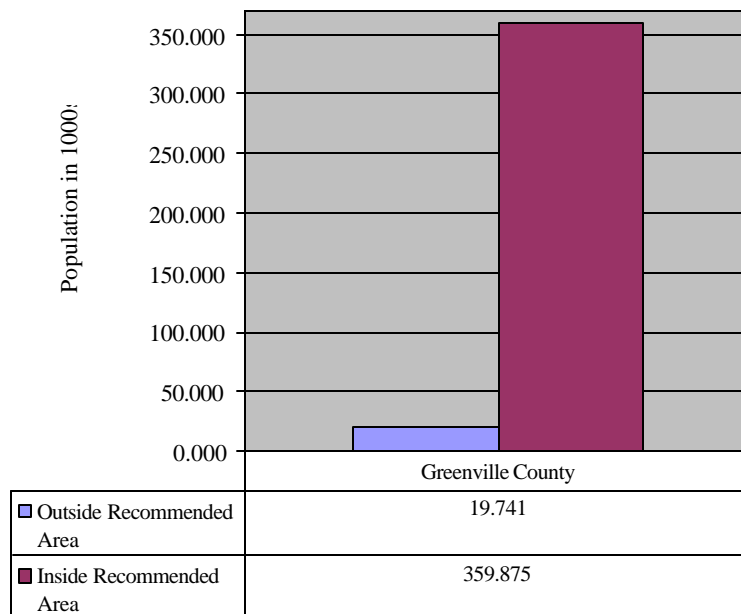
¹ Data provided by US Census: 2000. The data for the recommended area was obtained from the SCDOT.

² Data provided by SC Office of Research and Statistics.

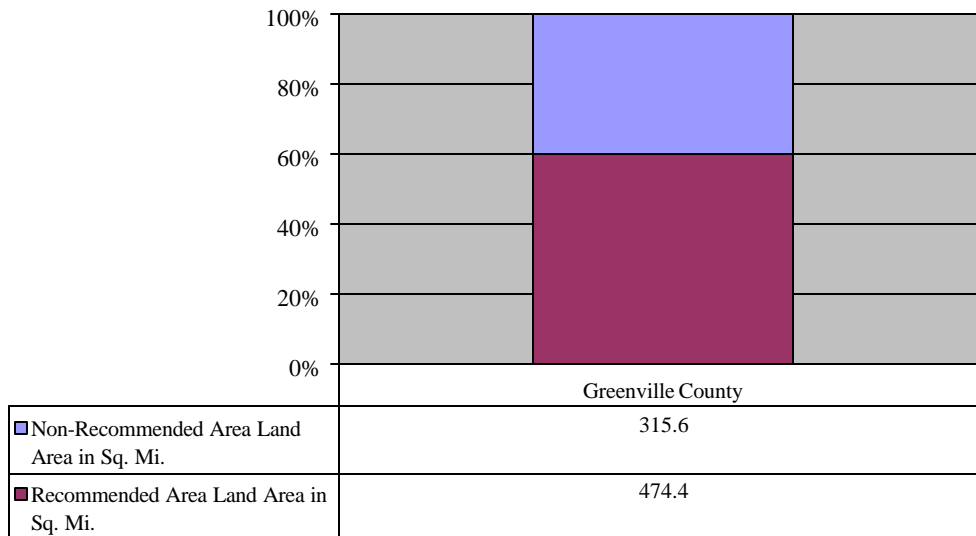
**Figure B-1: Population Density, 2000
(Persons per Square Mile)**



**Figure B-2:
Population Distribution
Relative to recommended Area Boundaries, 2000**



**Figure B-3: Land Area Distribution
According to Recommended Area Boundaries, 2000**



According to the US Census, manufacturing is defined as the mechanical, physical, or chemical transformation of materials or substances into new products. The assembly of components into new products is also considered manufacturing, except when it is appropriately classified as construction. Establishments in the manufacturing sector are often described as plants, factories, or mills and typically use power-driven machines and materials-handling equipment. Also included in the manufacturing sector are some establishments that make products by hand, like custom tailors and the makers of custom draperies. While manufacturers typically do not sell to the public, some establishments like bakeries and candy stores that make products on the premises may be included. The retail trade sector comprises establishments engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise.

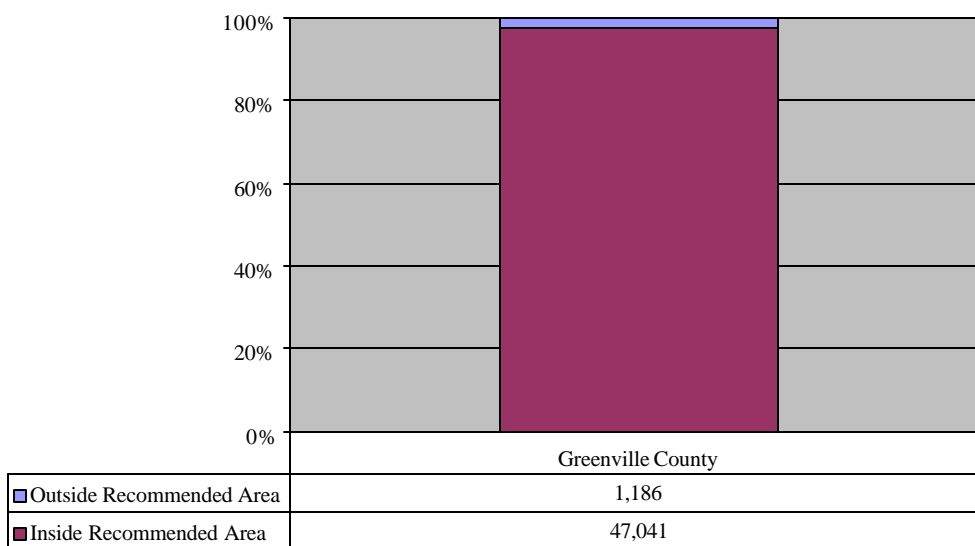
The Greenville Nonattainment Area contains a large majority of the economic development, both manufacturing and retail trade, relative to Greenville County. Almost 99% of the manufacturing establishments and 97.5% of the manufacturing employees in Greenville County are located inside of the boundary. The concentrated urban recommended area also supports retail trade. Greenville County employs a total of 26,275 retail trade employees at 1,860 establishments throughout the area. Given that the vast majority of the manufacturing establishments and employees in the county are located in the recommended area, that the county is predominantly urban, and that the recommended area contains the urbanized areas in the county, it is reasonable to assume that the majority of the retail trade employees and establishments in the county are contained within the recommended area boundary.

Table B-2: Total Number of Manufacturing Employees, 2000 ³			
	In Recommended Boundary	In County Boundary	Percent in Recommended Boundary
Greenville County	47,041	48,227	97.5%

Table B-3: Total Number of Manufacturing Establishments, 2000 ⁴			
	In Recommended Area	In County Boundary	Percent in Recommended Area
Greenville County	537	543	98.9%

Table B-4: Retail Trade Patterns, 2000 ⁵		
	Number of Employees	Number of establishments
Greenville County	26,275	1,860

**Figure B-4: Distribution of Manufacturing Employees
Relative to Greenville Boundary, 2000**



³ Data from Bureau of Air Quality file entitled "SC Company File1.xls."

⁴ Data from Bureau of Air Quality file entitled "SC Company File1.xls."

⁵ Data provided by US Census: 2000.

C. Monitoring Data Representing Ozone Concentrations in Local Areas and Larger Areas (urban or regional scale)

Greenville County does not have an ozone monitoring station; however, neighboring Anderson, Pickens, and Spartanburg Counties do. Ozone concentration data from those areas can be found in the Anderson Nonattainment Area and Spartanburg Nonattainment Area documents.

D. Location of Emission Sources

Table D-1 lists the NO_x point sources that are in operation in Greenville County based on the 1999 NO_x and VOC emissions inventory iSteps data. Greenville County has 56 NO_x point sources in operation and 53 of these point sources are located within the nonattainment area. Facilities in **Red** are within the proposed boundary; facilities in **Black** are outside the proposed boundary.

Table D- 1: Greenville County Point Source NO2 Emissions				
County	Plant Name	Permit Number	Pollutant	Emissions (tons/year)
Greenville	3M:Film Plant	1200-0073	NO2	24.19
Greenville	Air Products: Piedmont	1200-0075	NO2	2.31
Greenville	American Woodworks: Greenville	1200-0346	NO2	0.52
Greenville	Ashmore: #1	9900-0013	NO2	6.97
Greenville	Bellsouth: Greenville-College St	1200-0231	NO2	0.76
Greenville	Blythe Construction: Plant 4	9900-0169	NO2	2.46
Greenville	Bob Jones University	1200-0245	NO2	58.54
Greenville	Caraustar: Taylors	1200-0013	NO2	32.86
Greenville	Cognis Corporation	1200-0067	NO2	0.20
Greenville	Columbia Farms: Greenville	1200-0232	NO2	3.20
Greenville	Crown Metro: Plant 1	1200-0034	NO2	2.78
Greenville	Cryovac-Simpsonville (Sealed Air Corp)	1200-0024	NO2	24.03
Greenville	Dan River: White Horse	1200-0196	NO2	4.16
Greenville	Delta Mills: Estes	1200-0016	NO2	3.07
Greenville	Engineered Products: Furman Hall Rd Plant	1200-0181	NO2	0.19
Greenville	Ethox Chemicals	1200-0171	NO2	6.82
Greenville	Excalibur Tool: Poinsett	1200-0277	NO2	0.13
Greenville	Gateway Mfg: Plant #2 - Greenville	1200-0317	NO2	0.01
Greenville	GE: Greenville	1200-0094	NO2	46.95
Greenville	Geschmay Corp	1200-0315	NO2	2.71
Greenville	Greenville Finishing	1200-0217	NO2	2.20
Greenville	Greenville Hospital System: Energy Plant	1200-0145	NO2	14.05
Greenville	Hitachi Electronic	1200-0203	NO2	30.69
Greenville	Holly Oak Chemical	1200-0191	NO2	0.55
Greenville	JPS:Slater	1200-0017	NO2	31.55
Greenville	Kemet: Fountain Inn	1200-0147	NO2	3.19

Greenville Nonattainment Area

Table D- 1: Greenville County Point Source NO2 Emissions				
County	Plant Name	Permit Number	Pollutant	Emissions (tons/year)
Greenville	Kemet: Greenville	1200-0018	NO2	0.77
Greenville	Kemet: Mauldin	1200-0104	NO2	46.97
Greenville	King Asphalt: # 3	9900-0283	NO2	2.82
Greenville	Kyocera Mita	1200-0207	NO2	0.09
Greenville	Lockheed Martin Aircraft Center	1200-0149	NO2	2.06
Greenville	Messer Industries	1200-0269	NO2	0.00
Greenville	Metromont: Paris Mountain	1200-0150	NO2	0.01
Greenville	Metromont: Roper Mountain Road	1200-0200	NO2	0.00
Greenville	Michelin: Greenville	1200-0039	NO2	71.87
Greenville	Milliken: Enterprise Plant	1200-0060	NO2	1.98
Greenville	Milliken: Gayley Mill	1200-0029	NO2	27.25
Greenville	Milliken: Judson Mill	1200-0028	NO2	2.52
Greenville	Mitsubishi Polyester Film LLC	1200-0026	NO2	33.39
Greenville	National Electric Carbon	1200-0121	NO2	1.16
Greenville	Nutricia: Greenville	1200-0127	NO2	4.44
Greenville	Panagakos Asphalt Paving	9900-0362	NO2	0.77
Greenville	Para-Chem Southern Inc	1200-0099	NO2	1.05
Greenville	Rexroth:Southchase Court	1200-0326	NO2	13.59
Greenville	Reynolds Chemical: Greenville	1200-0247	NO2	2.08
Greenville	RMAX	1200-0345	NO2	0.13
Greenville	Saint Gobain Abrasives	1200-0179	NO2	0.03
Greenville	SC Steel Corp	1200-0362	NO2	0.00
Greenville	Scotts Sierra: Travelers Rest	1200-0033	NO2	1.49
Greenville	Sherwin Williams: Fountain Inn	1200-0163	NO2	0.31
Greenville	Specialty Shearing	1200-0123	NO2	10.61
Greenville	St Francis Hospital	1200-0139	NO2	4.01
Greenville	Stevens Aviation: Donaldson Park	1200-0311	NO2	0.75
Greenville	Transflo Terminal SVCS: Greenville	1200-0337	NO2	2.22
Greenville	US Finishing	1200-0009	NO2	55.23
Greenville	Zupan & Smith: Simpsonville	9900-0158	NO2	0.26
	1999 Greenville Co. Total			592.95
	Emissions in Nonattainment Area-Total			532.17
	Emissions in Nonattainment Area-Percent			89.7%

Table D-2 lists the VOC point sources that are in operation in Greenville County based on the 1999 NO_x and VOC emissions inventory i-Steps data. Greenville County has 64 VOC point sources in operation and 61 of these point sources are located within the nonattainment area.

Table D-2: Greenville County Point Source VOC Emissions

County	Plant Name	Permit Number	Pollutant	Emissions (tons/year)
Greenville	3M: Film Plant	1200-0073	VOC	55.34
Greenville	3M: Tape Plant	1200-0148	VOC	641.15
Greenville	Air Products: Piedmont	1200-0075	VOC	4.08
Greenville	American Woodworks: Greenville	1200-0346	VOC	6.94
Greenville	Ashmore: #1	9900-0013	VOC	0.13
Greenville	Bellsouth: Greenville -College St	1200-0231	VOC	0.04
Greenville	Blythe Construction: Plant 4	9900-0169	VOC	0.05
Greenville	Bob Jones University	1200-0245	VOC	34.41
Greenville	Caraustar: Taylors	1200-0013	VOC	0.65
Greenville	Cognis Corporation	1200-0067	VOC	7.11
Greenville	Columbia Farms: Greenville	1200-0232	VOC	0.06
Greenville	Crown Metro:Plant1	1200-0034	VOC	6.03
Greenville	Cryovac-Simpsonville (Sealed Air Corp)	1200-0024	VOC	407.78
Greenville	Dan River: White Horse	1200-0196	VOC	4.12
Greenville	Delta Mills:Estes	1200-0016	VOC	5.74
Greenville	Engineered Products: Furman Hall Rd Plant	1200-0181	VOC	76.92
Greenville	Ethox Chemicals	1200-0171	VOC	0.52
Greenville	Excalibur Tool: Poinsett	1200-0277	VOC	14.41
Greenville	Gateway Mfg: Plant #2 - Greenville	1200-0317	VOC	26.65
Greenville	GE: Greenville	1200-0094	VOC	22.02
Greenville	Geschmay Corp	1200-0315	VOC	1.97
Greenville	Greenville Finishing	1200-0217	VOC	2.20
Greenville	Greenville Hospital System: Energy Plant	1200-0145	VOC	0.83
Greenville	Greenville News	1200-0226	VOC	1.35
Greenville	Hitachi Electronic	1200-0203	VOC	97.74
Greenville	Holly Oak Chemical	1200-0191	VOC	0.03
Greenville	JPS: Slater	1200-0017	VOC	26.28
Greenville	Kemet: Fountain Inn	1200-0147	VOC	46.19
Greenville	Kemet: Greenville	1200-0018	VOC	22.57
Greenville	Kemet: Mauldin	1200-0104	VOC	53.57
Greenville	King Asphalt: # 3	9900-0283	VOC	4.50
Greenville	Kyocera Mita	1200-0207	VOC	0.01
Greenville	Lockheed Martin Aircraft Center	1200-0149	VOC	21.01
Greenville	Messer Industries	1200-0269	VOC	19.53
Greenville	Metromont: Paris Mountain	1200-0150	VOC	0.00
Greenville	Metromont: Roper Mountain Road	1200-0200	VOC	0.00
Greenville	Michelin: Greenville	1200-0039	VOC	654.79
Greenville	Milliken: Enterprise Plant	1200-0060	VOC	15.76
Greenville	Milliken: Gayley Mill	1200-0029	VOC	40.35
Greenville	Milliken: Judson Mill	1200-0028	VOC	4.09
Greenville	Mitsubishi Polyester Film LLC	1200-0026	VOC	171.12

Table D-2: Greenville County Point Source VOC Emissions				
County	Plant Name	Permit Number	Pollutant	Emissions (tons/year)
Greenville	National Cabinet Lock	1200-0107	VOC	2.01
Greenville	National Electric Carbon	1200-0121	VOC	40.97
Greenville	Nutricia: Greenville	1200-0127	VOC	66.37
Greenville	Panagakos Asphalt Paving	9900-0362	VOC	1.19
Greenville	Para-Chem Southern Inc	1200-0099	VOC	1.06
Greenville	Parthenon Marble	1200-0260	VOC	7.12
Greenville	Rexroth: Southchase Court	1200-0326	VOC	0.87
Greenville	Reynolds Chemical: Greenville	1200-0247	VOC	25.23
Greenville	Rmax	1200-0345	VOC	9.55
Greenville	Rudco Products Inc	1200-0194	VOC	17.93
Greenville	Saint Gobain Abrasives	1200-0179	VOC	0.00
Greenville	SC Steel Corp	1200-0362	VOC	32.60
Greenville	Scotts Sierra: Travelers Rest	1200-0033	VOC	0.06
Greenville	Sherwin Williams: Fountain Inn	1200-0163	VOC	12.83
Greenville	Specialty Shearing	1200-0123	VOC	0.27
Greenville	St Francis Hospital	1200-0139	VOC	5.55
Greenville	Standard Motor Products Inc	1200-0132	VOC	0.88
Greenville	Stevens Aviation: Donaldson Park	1200-0311	VOC	20.07
Greenville	Thermo Kinetics	1200-0313	VOC	1.01
Greenville	Transflo Terminal SVCS: Greenville	1200-0337	VOC	0.12
Greenville	US Finishing	1200-0009	VOC	135.16
Greenville	Woven Electronics	1200-0252	VOC	5.16
Greenville	Zupan&Smith: Simpsonville	9900-0158	VOC	0.01
	1999 Greenville Co. Total			2,884.06
	Emissions in Nonattainment Area-Total			2,801.67
	Emissions in Nonattainment Area-Percent			97.1%

Table D-3 lists the NO_x on-road emissions for Greenville County and Table D-4 lists the VOC on-road emissions.

Table D- 3: Greenville County On-road NO _x Emissions			
County	Tier 1	Tier 2	Highway NO ₂ (Tons Per Year)
Greenville	11-Highway Vehicles	01-Light-Duty Gas Vehicles & Motorcycles	4,091.00
Greenville	11-Highway Vehicles	02-Light-Duty Gas Trucks	2,268.00
Greenville	11-Highway Vehicles	03-Heavy-Duty Gas Vehicles	588.00
Greenville	11-Highway Vehicles	04-Diesels	4,219.00
	1999 Greenville Co Total		11,166.00

Table D-4: Greenville County On-road VOC Emissions			
County	Tier 1	Tier 2	Highway VOC (Tons Per Year)
Greenville	11-Highway Vehicles	01-Light-Duty Gas Vehicles & Motorcycles	5,411.00
Greenville	11-Highway Vehicles	02-Light-Duty Gas Trucks	3,040.00
Greenville	11-Highway Vehicles	03-Heavy-Duty Gas Vehicles	708.00
Greenville	11-Highway Vehicles	04-Diesels	332.00
	1999 Greenville Co Total		9,491.00

E. Traffic and Commuting Patterns

Estimates of the Daily Vehicle Miles Traveled (DVMT) were obtained from the South Carolina Department of Transportation (SCDOT). SCDOT determines current DVMT by multiplying traffic volume (through traffic counts) and lane miles (determined by the Highway Performance Monitoring System) for each particular area. The South Carolina Department of Public Safety, Division of Motor Vehicles, provided motor vehicle registration data. All other data in this section was obtained from the US Census Bureau. All data is based on the year 2000.

Table E-1⁶ shows that in 2000 the Greenville Nonattainment Area captured 91.62% of the DVMT and in 2025 it will capture 110.85% of the DVMT.

Table E-1: DVMT for the Greenville Nonattainment Area.				
County	2000 DVMT	2025 DVMT	DVMT Change (2000-2025)	Projected % Annual Change
Greenville	9,421,709	14,705,492	5,283,783	2.24
Greenville Nonattainment Total ⁷	8,632,514	16,301,210	7,668,696	3.55
%DVMT Captured inside Nonattainment Boundary	91.62	110.85		

The Greenville Nonattainment Area Map (Figure 1) shows that there are six major routes of travel through the Greenville Nonattainment Area boundary. They include two interstates (I-85 and I-385) and four US Highways (25, 29, 123, and 276). There are also numerous State and secondary roads in the county that connect the larger towns together. I-85 is the major corridor between Atlanta, Georgia, and Charlotte, North Carolina.

Table E-2 presents the breakdown by road classifications of DVMT traveled in the Greenville Nonattainment Area boundary counties from 2000 and projected through 2025.

⁶ Data provided by SCDOT.

⁷ Greenville Nonattainment Area totals based on MPO figures and may reflect an overestimation of the total percent captured by the boundary.

Table E-2: DVMT Data for Greenville Area Counties

	2000	Projected 2007	Projected 2012	Projected 2025
Greenville County				
Rural Interstate (01)	605,987	755,682	862,607	1,140,612
Rural Principal Arterial (02)	470,166	534,064	568,524	691,096
Rural Minor Arterial (03)	543,348	617,191	657,015	798,665
Rural Major Collector (04)	930,573	1,057,042	1,125,247	1,367,847
Rural Minor Collector (05)	50,942	57,865	61,599	74,880
Rural Local (09)	309,140	351,154	373,812	454,404
<i>Rural Total</i>	<i>2,910,155</i>	<i>3,372,998</i>	<i>3,648,804</i>	<i>4,527,504</i>
Urban Interstate (11)	1,604,349	1,985,303	2,257,413	2,964,899
Urban Freeway/Expressway (12)	46,581	52,912	56,326	68,469
Urban Principal Arterial (13)	1,743,223	1,980,136	2,107,902	2,562,360
Urban Minor Arterial (14)	1,797,160	2,041,403	2,173,123	2,641,641
Urban Collector (15)	1,036,576	1,177,451	1,253,426	1,523,660
Urban Local (18)	283,665	322,217	343,008	416,959
<i>Urban Total</i>	<i>6,511,554</i>	<i>7,559,421</i>	<i>8,191,197</i>	<i>10,177,988</i>
Grand Total DVMT	9,421,709	10,932,419	11,840,001	14,705,492

Table E-3: Where People Work Who Live In SC

County Worked In	County of Residence		
	Greenville	Out of state	Grand Total
Grand Total	159,316	3,998	163,314
Abbeville	13		13
Aiken	37		37
Allendale	9		9
Anderson	2,679		2,679
Barnwell	32		32
Beaufort	12		12
Berkeley	5		5
Charleston	101		101
Cherokee	85		85
Chester	22		22
Colleton	5		5
Dorchester	16		16
Edgefield	6		6
Fairfield	5		5
Florence	20		20
Georgetown	13		13
Greenville	143,844	3,998	147,842
Greenwood	130		130
Horry	42		42
Jasper	6		6
Kershaw	4		4
Lancaster	8		8
Laurens	991		991

Table E-3: Where People Work Who Live In SC			
County Worked In	County of Residence		
	Greenville	Out of state	Grand Total
Lexington	54		54
McCormick	8		8
Newberry	28		28
Oconee	278		278
Orangeburg	15		15
Out of state	2,003		2,003
Pickens	1,981		1,981
Richland	215		215
Spartanburg	6,537		6,537
Sumter	15		15
Union	36		36
York	61		61

Table E-3⁸ presents the 2000 worker flow data from each of the counties. Some counties that are listed on this table are not being considered for boundary recommendations and are being included on this chart to account for all workers in each county. Approximately 87% of workers that live in Greenville County work inside the county. Approximately 80% of the workers that work outside of Greenville County commute to the neighboring Counties of Anderson, Pickens, Laurens, or Spartanburg, and approximately 12% work out of state.

⁸ Data provided from US Census: 2000.

**Figure E-1:
Urban vs. Rural DVMT for Greenville County**

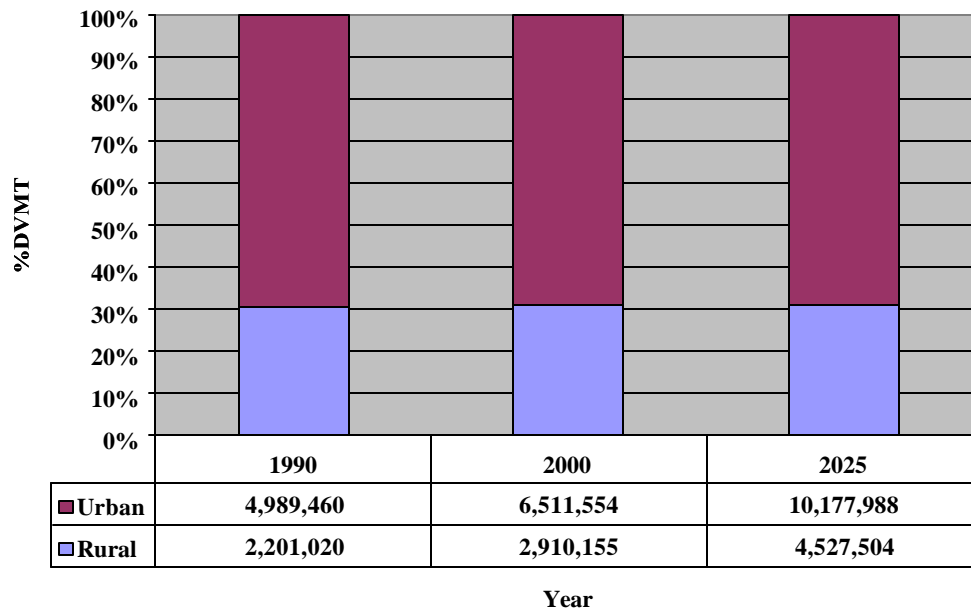


Figure E-1⁹ presents the urban and rural DVMT for Greenville County. This figure shows that Greenville County has approximately 70% of DVMT categorized as urban in nature.

⁹ Data provided from US Census: 2000.

**Figure E-2:
Motor Vehicle Registration
Greenville MPO Counties, 2000**

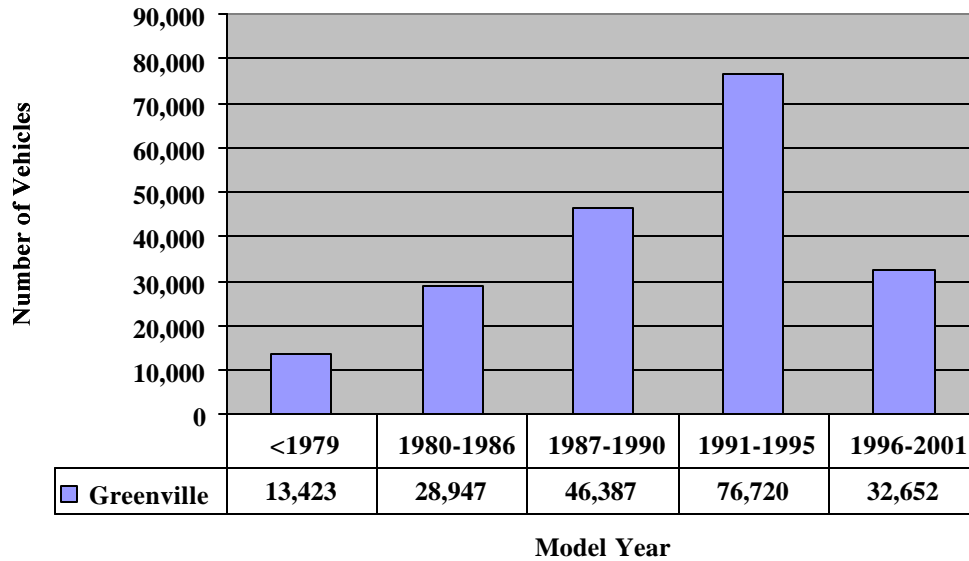


Figure E-2¹⁰ presents the motor vehicle registration data for Greenville County. Only a small portion of the vehicles are pre-1981 model years. In 1981 new cars were outfitted with three-way catalysts, on-board computers, and oxygen sensors to help increase the efficiency of the catalytic converters. This figure shows that the majority of cars registered are model years 1991-1995. In 1991 the EPA established lower tailpipe standards for hydrocarbons and nitrogen oxides beginning with 1994 model year vehicles.

This data reflects 2000 registration figures, and many vehicle owners will elect to replace vehicles with newer vehicles in the coming years. These vehicle turnovers, combined with future national low sulfur fuel standards, the use of Onboard Diagnostic (OBD) systems, and Onboard Refueling Vapor Recovery (ORVR) systems will help to offset any potential impacts from the increased emissions from mobile sources in this area.

F. Expected Growth (Including Extent, Pattern, and Rate of Growth)

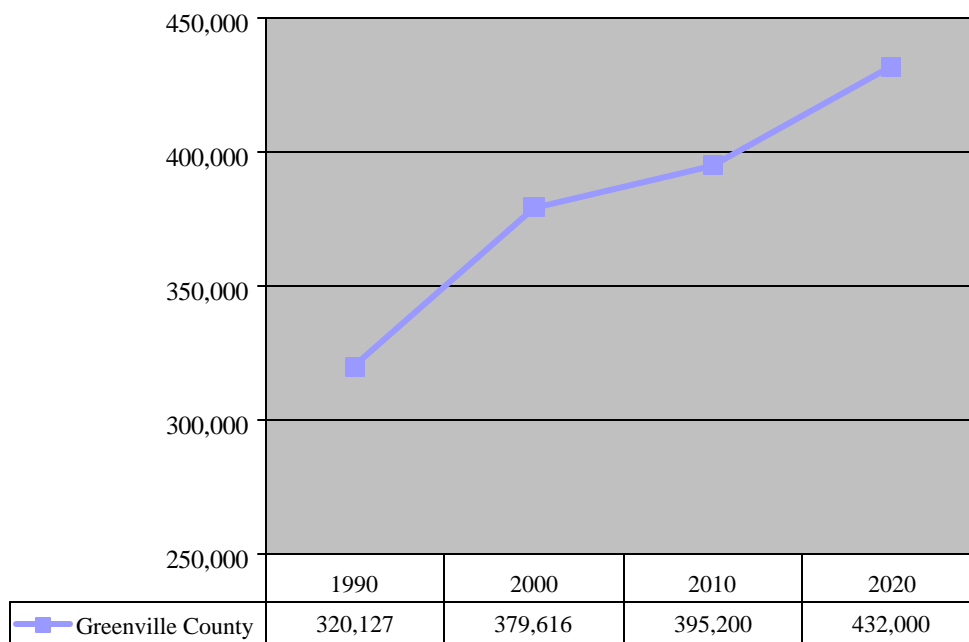
Limited data is available in assessing expected growth for Greenville County, and there is no known data to assess growth for the Greenville Nonattainment Area. Conclusions were drawn based on historical data from 1990, current data from 2000, and population projections for 2020. Economic growth, relative to population growth, is even harder to predict. No knowledge of major economic expansions is available. While it is certain that population counts will grow, it is only assumed that current economic factors will remain stable or that some economic growth will occur. It is reasonable to expect the majority of that growth to be located inside, or at least near, the boundary.

¹⁰ Data provided by SC Department of Public Safety, Division of Motor Vehicles.
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**Table F-1:
Historical and Projected Population and Population Density per County**

	Greenville County
Population, 1990 ¹¹	320,127
Population, 2000 ¹²	379,616
Projected Population, 2020 ¹³	432,000
Population Growth Rate, 1990 - 2000 (Persons per 5 Years)	29,744.5
Projected Population Growth Rate, 2000 - 2020 (Persons per 5 Years)	13,096
Land Area (Sq. Miles)	790
Persons per Sq. Mile, 2000	480.5
Projected Persons per Sq. Mile, 2020	546.8
Urban Population, 2000	315,095
% Urban Population, 2000	83.0%
Rural Population, 2000	64,521
% Rural Population, 2000	17.0%

**Figure F-1:
Population Growth by County, 1990 - 2020**



It should be noted that trends are based on projected data for 2020. The population will grow in the

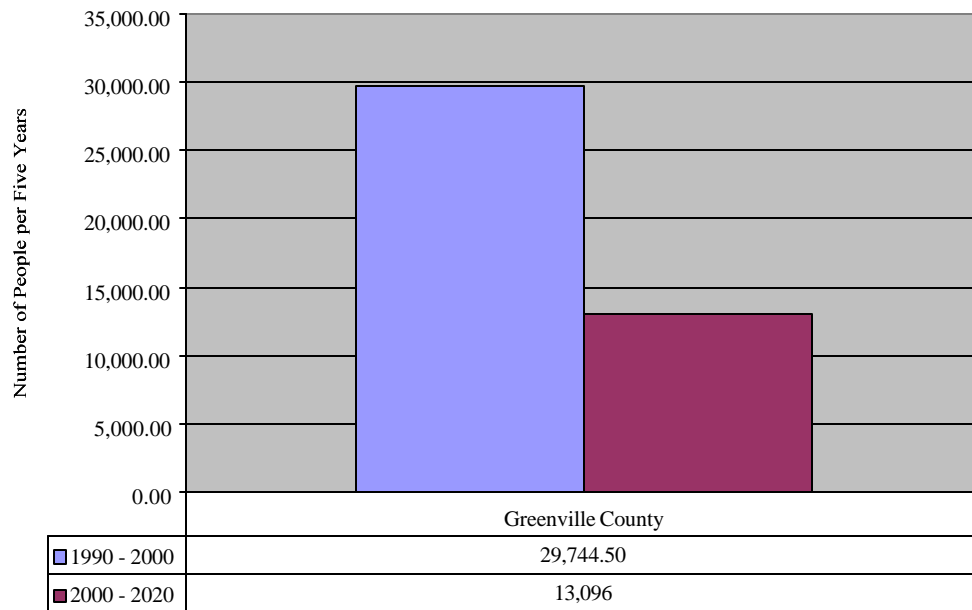
¹¹ Data provided by US Census: 2000.

¹² Data provided by US Census: 2000.

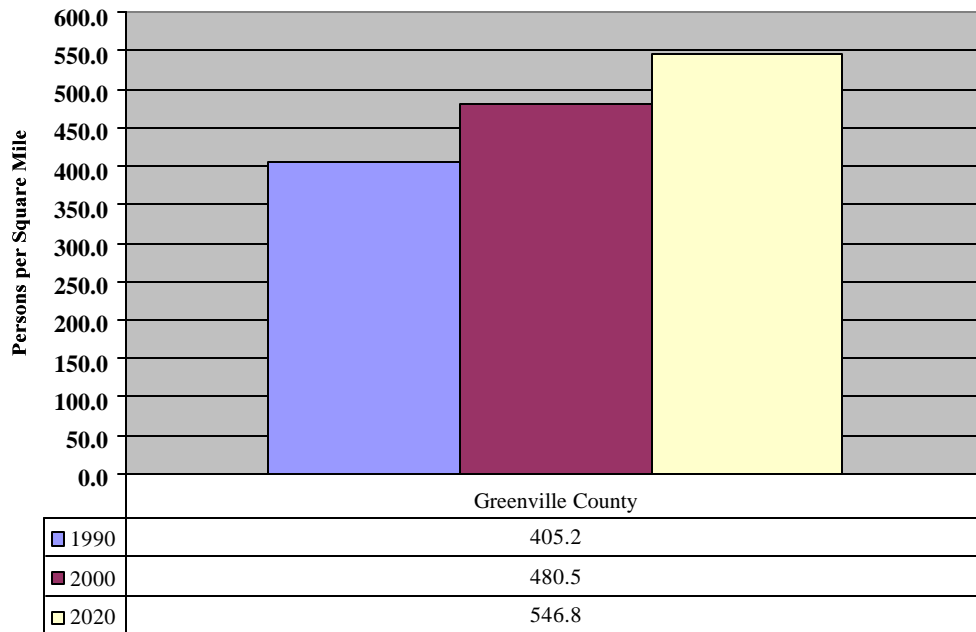
¹³ Data provided by EPA.

county. Comparing the population increase per five years over the last ten years (1990 – 2000) to the projected population increase per five years over the next twenty years (2000 – 2020) shows that the rate of growth slow for Greenville County.

**Figure F-2:
Rate of Population Growth, 1990 - 2020**



**Figure F-3:
Historical and Projected Population Density**



Figures F-1, F-2, and F-3 show historical and projected data for total population, rate of growth, and population density, respectively, for Greenville County. Since the boundary includes the majority of Greenville County and already captures the area's urban population, it is reasonable to conclude that the boundary at least approximates, if not contains, the expected population growth, and hence the economic growth, for the area in the coming years.

The largest employment sector in Greenville County is manufacturing.¹⁴ The second largest is construction while the third is administration, support, waste management, and remediation services.

G. Meteorology

See Section V - G of Introduction.

H. Topography

See Section V - H of Introduction.

I. Jurisdictional Boundaries

The Greenville Nonattainment Area boundary includes only that portion of the Greenville MPO that is within Greenville County. The portions of the Greenville MPO that are in Pickens County and

¹⁴ Data provided by US Census: 2000.

Spartanburg County will be designated in separate nonattainment areas.

Starting point is on the west side of the Greenville County - Pickens County line at SC 183 (Farrs Bridge Rd) on the Saluda River.

Follows Saluda River - Greenville - Pickens county line north for 5.0 miles to North Saluda River.

Follows North Saluda River north and northeast into Greenville County for 7.2 miles to Bulls Creek.

Follows Bulls Creek east for 1.9 miles to Valley Lake.

From Valley Lake northeast for 0.4 miles to US 25 at Skyview Dr.

From US 25 at Skyview Dr. northeast for 1.3 miles to Mush Creek.

Follows Mush Creek east for 3.8 miles to South Tyger River.

Follows South Tyger River southeast for 1.9 miles to Wildcat Creek.

Follows Wildcat Creek northeast for 3.0 miles to intersection of S-23-114 (Donahue Rd) and S-23-277 (Jordan Rd.)

From intersection of S-23-114 (Donahue Rd.) and S-23-277 (Jordan Rd.) southeast for 0.5 miles to Pink Dill Mill Rd and Barnes Creek.

Follows Barnes Creek east for 3.6 miles to Middle Tyger River.

Follows Middle Tyger River southeast for 3.4 miles to the Greenville - Spartanburg county line.

Follows Greenville - Spartanburg county line southeast to intersection of Greenville - Spartanburg - Laurens county line.

Follows Greenville - Laurens county line southwest South Rabon Creek.

Follows South Rabon Creek northwest for 3.1 miles to S-23-55 (Fairview Rd.) at S-23-154 (McKelvey Rd.)

Follows S-23-154 (McKelvey Rd.) southwest for 0.6 miles to branch of Reedy River.

Follows branch of Reedy River west for 3.0 miles to Reedy River.

Follows Reedy River South 1.0 mile to Little Creek.

Follows Little Creek west for 4.9 miles to S-23-50 (Hopkins Rd.)

From S-23-50 (Hopkins Rd.) and Little Creek intersection southwest for 5.4 miles to Saluda River at gas pipeline on Greenville - Anderson county line just north of Kirby Green Rd.

Follows Saluda River - Greenville county line north back to starting point.

J. Level of Control of Emission Sources

Through its participation with the Early Action Compacts, Greenville County is exploring local control strategies such as an ozone action coordinator, low sulfur fuels, alternative fuels, hybrid vehicles, high occupancy vehicle lanes, modified speed limits, open burning restrictions, and congestion management and Intelligent Transportation System.

K. Regional Emissions Reductions

See Section V of the Introduction.